With What Frequency Are Teachers Employing Evidenced-Based Procedures in their Writing Classrooms?

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Graham and Perin (2007) state that "writing well is not just an option for young people –
it is a necessity" (p.3), that developing the writing skills necessary for academic success and for
participation in the global economy is fast becoming too important to leave to chance. Research
in the field of composition instruction suggests that particular strategies can help improve the
writing quality of students in the school system (Graham & Perin, 2007, Hillocks, 1986,
MacArthur, Graham, & Fitzgerald, 2006). Systematic instruction and assessment of these
strategies has a direct impact on the quality of student writing. Although the issue of *quantity* of
instruction (rather than type of instruction) is not broadly addressed in the research literature,
what is indicated is that strategy instruction needs to provide students with multiple opportunities
to learn, practice, and use the strategies in their own writing. So, while quantity in itself may not
be an indicator of success there does seem to be an implied indication in the literature that
frequency of instruction is an important criterion. Bromley (2007) says that "classroom practices
that give students *plenty of opportunities for writing* and self-assessment at every grade level,
both individually and together, are critical in developing strong writers" (p. 260).

The *Common Curriculum Framework for English Language Arts, Kindergarten to Grade
12*, was developed by the ministries of Education in Alberta, British Columbia, Manitoba,
Saskatchewan, the Northwest Territories, and the Yukon Territory in 1998. Subsequently, each
province and territory developed its own framework and implementation document based on the
outcomes of the protocol. Within the overview of the implementation documents, there are
several references to the importance of frequency of instruction during composition studies.

The curriculum is based on a notion of spiralling that allows teachers to reach what the document identifies as the "desired outcome" of the language arts curriculum. The outcome of the curriculum would be that "eventually students were able to practice or apply the process, skill, or strategy independently and direct their own learning" (Manitoba Education, Training, and Youth, [METY] 1998b, p.2). From a social constructivist perspective, this movement to independence is referred to as moving learning from the social plane to the individual plane. Vygotsky suggests that this is done by having the expert and the novice work together to "perform a process" (Englert, Mariage, & Dunsmore, 2006). With repeated guided practice, the novice takes on increasing responsibility while the expert assists. Again, time for instruction is necessary for students to master process. The practice of assigning writing activities and then assessing those products without repeated process not only results in a product of less quality but in a "premature evaluation that will short circuit the process and stall risk taking" (Newell, 2006, p. 236).

The implementation overview (METY, 1998b) states, "When strategies are explained in terms of their value to the learner, and are demonstrated and practiced over time, they can produce long-lasting significant improvements in the students' ability to construct meaning and achieve the language arts learning outcomes" (p.1). The point is made that the strategies must be "practiced over time" (p. 1). This suggests that frequency with gradual release of responsibility is key to improvement of writing quality. Yet time is often in short supply in many classrooms and writing instruction often suffers because of this lack of time. The National Commission on Writing (2003) refers to the instruction of writing as a "prisoner of time" (p.20) both in classrooms and in faculties that instruct pre-service teachers in the instruction of composition. The report states that the skills for writing cannot be "picked up from a few minutes here, and a

few minutes there" (p. 20). The report goes on to report results from the National Assessment of Educational Progress (NAEP) in the United States. Disturbingly they report that 97% of elementary students spend three hours or less on writing assignments each week. This "amounts to 15% of the time they spend watching television." In high school, only half of students report being assigned a paper of three or more pages once or twice a month and 39% report that they never or hardly ever have writing assignments (p. 20).

This lack of time investment seems to be having an impact on writing quality. The National Commission on Writing (2003) found that only twenty two percent of grade twelve students in the United States were scoring at or above a proficient level in writing as measured by the NAEP data from 2003. The figure from the 2007 assessment was twenty-four percent (Salahu-Din, Persky, & Miller, 2008). Yet parents and children feel that there is "a greater need to write well today than there was twenty years ago" (Lenhart, Arafeh, Smith, & MacGill, 2008, p.iii).

The connection between students and writing seems to be becoming ever more complex. On one hand, adolescents in particular, seem to be engaged in increasing numbers of writing activities. Texting, instant messaging, blogging, social networking sites, and e-mail have made communication in print part of a teenager's daily life. Yet teenagers themselves seem reluctant to consider these activities "real writing" (Lenhart et al., 2008, p. i). The National Commission on Writing (2003) states, "Students can 'write,' the difficulty is that they cannot systematically produce writing at the high levels of skill, maturity, and sophistication required in a complex modern economy" (p. 16).

Teenagers themselves report that additional instruction and focus on writing in school would help to improve their writing. Eighty two percent of teens indicate that having teachers

spend more time on writing in class would improve their writing abilities (Lenhart et al., 2008, p. iv). The National Assessment of Education Progress (NAEP) asked students to complete a survey on instructional methods used in their writing classes. These surveys, when analyzed with writing samples, suggest that the frequency of instructional methods has a direct impact on quality of writing. Those students who indicated that they regularly engaged in the writing process had higher test scores than those who did not (cited in Unger & Fleischman, 2007). Eighth and twelfth grade students who reported that their "teachers asked them to plan their writing once or twice a month outperformed those whose teachers asked them to plan their writing at least once a week" (Greenwald, Perky, Campbell, & Mazzeo, 1999, p. 96). In addition, Greenwald, et al. stated that these students went on to independently use planning on assessment tasks. The frequency of instruction of strategies also increases the independent use of those strategies in students' independent writing. Graham (2006) acknowledged this necessity of frequency in his meta-analysis on the impact of strategy instruction on students writing process by including it in the criteria for the studies. Students had to be shown how to use the strategy through modeling, there had to be three or more days of instruction in which students took greater responsibility for independent use of the strategy. This investment of time and repeated practice in the writing process seems necessary to move students to independence.

Purpose and Procedures of the Study

The purpose of the study reported here was to investigate how often Western Canadian teachers engaged students in strategy instruction and writing activities identified by Graham and Perin's (2007) meta-analysis as effective in improving the quality of student writing. The study reported here was part of a larger study which investigated teacher practice in writing from

kindergarten to grade twelve (Note 1).

The samples were drawn from eight school divisions which represented urban, suburban, and rural schools. School division administrations were approached requesting access to teachers in the division, and principals of schools were also contacted asking if teachers could be contacted in their schools. Where possible, all teachers in a school or division were contacted by email and asked if they would participate in the survey on writing instruction in their classrooms.

The survey was roughly built on the eleven "elements" identified in the Graham and Perin (2007) meta-analysis. Questions were created to try to capture how often particular teaching and practice took place in each teacher's classroom. Teachers were given a description of a particular teaching activity or student activity and asked how often that activity took place in their classroom in writing or writing instruction. The choices were:

Frequently (once a week or more)

Often (once a month or more)

Seldom (a couple of times a year)

Unit (A unit is taught each year around the activity)

Never ("I do not use this activity")

Not Familiar ("I am not familiar with this activity") (Note 2)

Teachers were also asked about their teaching assignments (classroom teacher, resource teacher, administrator, etc.), were asked about the grade levels taught (early years, early middle years, late middle years, senior years), and were asked about their location (rural, suburban, urban), as well as their number of years in the profession (less than 5 years, 5 years – 10 years, more than 10 years). The surveys were administered anonymously through a survey website (surveymethods.com). No individual subject could be identified through the website.

In this report, we will be reporting only on the data from teachers who identified their teaching assignment as grades 4 to 12. These were divided into three categories: early middle years, late middle years, and senior years. Seventy-five teachers at these three grade level categories responded to the survey. Of those, the sample was roughly evenly distributed over years of teaching and over area (rural, suburban, urban). Of the sample, 30% of the sample were classroom generalists, two percent were classroom French immersion teachers, 28% were English Language Arts specialists, eight percent were content area specialists, two percent were second language classroom teachers, four percent were resource teachers or specialists, and one teacher was a teacher-librarian. Therefore, 96% of the sample were classroom teachers of one sort or another, while four percent were support specialists.

The data reported here are organized around the eleven approaches identified by Graham and Perin (2007) as empirically sound approaches to teaching writing for the purpose of improving student writing performance. The eleven instructional elements discussed in this paper were found by Graham and Perin to significantly increase the quality of adolescents' writing. These are listed in terms of strength of effect size (Note 3). The groups of studies reported below used improvement in writing as their measure of effectiveness. Graham and Perin explain: "In calculating learning-to-write effect sizes, writing quality was used as the outcome. Holistic quality scores (a single score that measures general overall quality) were used over analytic scales (separate scores for specific aspects of writing, such as content, organization, vocabulary, mechanics, and so forth). If only an analytic scale was available, the scores for mechanics were excluded when calculating a mean effect size for quality." (p. 40). So the emphasis here is on learning to write and on measuring growth in overall writing performance.

Results - The Most Powerful Practices

In the report compiled by Graham and Perin (2007), four elements appeared to have the strongest effect on the improvement of student writing. They are Direct Strategy Instruction, Summarization Instruction, Collaborative Writing, and Setting Specific Product Goals.

Direct Strategy Instruction

One of the two most powerful and effective means of improving student writing was found to be direct, explicit instruction in strategies for planning, revising, and editing compositions. Graham and Perin (2007) report that explicit instruction in writing strategies resulted in an average effect size of 0.82. This is a large effect size indicating that where students were engaged in direct strategy instruction, they outperformed the control groups by more than 29 percentile points (that is, the control group performed at the 50th percentile while the strategy instruction group performed at the 79th percentile). We found that some number of teachers had students engaging in pre-writing, revision, and editing, but few teachers explicitly taught the strategies on a regular basis.

In our survey of how teachers approach writing in their classrooms, we found that although 42.7% of our sample have students engage in pre-writing activities, only about a third of the teachers explicitly teach planning strategies frequently (35%), and about a fifth (20%) seldom or never teach pre-planning of any kind. It is interesting to note that only 19% of the teachers required their students to regularly hand in a plan before they began drafting their compositions and 39% say they never ask their students to hand in a plan before writing despite evidence that shows the importance of having a plan before beginning to write.

Revising a paper gives the students the opportunity to improve their paper by revisiting their ideas and organization. Graham, MacArthur, and Fitzgerald (2007) state that revising is a

process of comparing the actual text to the intended text; thus, revision depends on the goals of the writing task. In the grades 4-12 classrooms we found that only 24% of the teachers regularly teach their students explicit strategies on how to revise their papers while 31% of the teachers never teach their students how to revise their papers.

Only 27% of the teachers reported that they frequently allow students to rework their paper after they have been given teacher feedback, and 36% never give their students an opportunity to re-work their papers after getting teacher feedback. This, of course, begs the question of what the feedback is for if students are not allowed to re-write their papers after learning how to improve their work. Also of interest is the fact that only 23% of teachers regularly ask students to revise papers after receiving comments from other students while nearly half of the teachers (48%) never give students this opportunity.

Teaching editing strategies allows students to learn how to polish their papers so that readers can better understand what the authors are trying to say. In the 4-12 classrooms, 24% of the teachers say they frequently teach explicit editing strategies. And 23% of the teachers say that they never teach their students how to edit their papers.

Graham et al. (2007) observe that much of the skilled writer's time is spent planning, revising, monitoring, evaluating, and regulating the writing process. The authors go on to say that it was found that college students spend 50% of their writing time planning and reviewing what they write and that business executives spend almost two-thirds of their writing time planning.

The frequency of teaching students strategies for planning, revising, and editing and the frequency of allowing them time to practice these strategies can lead to improved writing skill (Graham et al., 2007). Self-editing, peer editing, and teacher editing all contribute to the revision

of students' writing. These strategies allow students to self monitor their learning so that they can see what they have learned as a result of writing and editing their paper and receiving teacher feedback. The more often they have the opportunity to practice these skills the easier it will be to become skilled writers.

Summarization

The second most powerful and effective means of improving students writing found by Graham and Perin (2007) was direct instruction in how to write summaries. They state, "Writing instruction [which] involves explicitly and systematically teaching students how to summarize texts . . . had a consistent, strong, positive effect on their ability to write good summaries." (p. 16). The average effect size for the explicit teaching of summarization was the same as for writing strategy instruction, .82. Again, students exposed to summary instruction performed 29 percentile points higher compared to students who did not.

Summarization involves teaching students step by step guidelines for creating their own summaries; students who do not learn this valuable technique would be at a disadvantage when reading content area texts. In our survey we found that only 11% of the teachers in grades 4-12 frequently teach their students how to systematically summarize text and 53% said that they never teach their students summarizing.

Once children reach grade 4 more time is spent on instructing students in reading to learn rather than learning to read. Macarthur, Graham, and Fitzgerald (2006) describe summarization as a way to facilitate topic understanding because writing a summary allows students to manipulate information in a more active way during the reading of the text. Classroom teachers have to make writing part of everything that they do. If writing is to be thought of as an

important tool for learning and thinking, then the school community may need to discuss purposes beyond the obvious one of communication.

Students who are taught to write effect summaries and practice that skill frequently exercise increased reading, writing, and critical thinking skills. Practicing these skills can lead to better understanding of how authors put together ideas which can only lead to improved writing.

Collaborative Writing

Graham and Perin (2007) found that having students engage in collaborative writing resulted in a strong average effect size, 0.75. The instructional arrangement involved "adolescents working together to plan, draft, revise, and edit their compositions." (p. 16). Students who participated in collaborative writing exceeded their peers who wrote independently by 27 percentile points.

In our research we found that approximately 1 in 7 teachers engage students in collaborative writing regularly (15%) while 43% say that they never engage students in collaborative writing at any time. Graham and Perin found that students who are allowed to work collaboratively on writing activities and who participate in peer responding activities help each other with all aspects of composition.

When teachers allow frequent collaboration in their classrooms, students learn how to read their papers with a more critical eye. Knowing that a peer will be reading and helping to revise the paper leads to more thoughtful word choices and a desire to make sure that the meaning is clear. Practicing collaborative writing often makes the process easier to use and students can get comfortable with the idea of sharing their work throughout the writing process and not just at the end of the process. Since collaborative writing improves student writing it

makes sense to allow students to work collaboratively as much as possible. The need for employing collaborative writing in classrooms is supported by the work by Lunsford and Ede (1990) on the large frequency of collaborative writing that takes place in professional settings.

Setting Specific Product Goals

When teachers set specific and achievable goals for the product that students are expected to produce in class, the writing quality of student writing improves significantly. These goals include such things as the purpose of the assignment and characteristics of the final product. Students in classrooms where teachers gave identified explicit and specific goals performed more than 25 percentile points above students in classrooms where they were given a general overall goal. Graham and Perin (2007) state that "these relatively simple procedures resulted in a positive effect size, and the average effect was strong [0.70]" (p17).

In our survey we asked teachers if they set particular and specific sub-goals for particular pieces of writing. We found that a quarter of the teachers (26%) in grades 4-12 set goals for their students. We also discovered that approximately the same number of teachers never set specific sub-goals for their students' writing (26%). Knowing what is expected on any given assignment provides students with purpose for writing, and they learn the components of what constitutes, for example, a good report, essay or letter.

Setting specific product goals that are measurable, attainable, and meaningful will help students reach a finished product. Hillocks (1986) found in his analysis that engaging writers in the use of criteria applied to their own or others' writing resulted not only in more effective revisions but also in superior first drafts. Setting a purpose for writing makes the job of writing easier for the student and also makes assessment easier for the teacher.

Results – Moderate to Strong Practices

The next set of teaching/learning strategies had moderate effects on the improvement of student writing. They were word processing and sentence combining.

Word Processing

The use of word processing, whether used collaboratively or under teacher guidance, appears to be very effective in improving the quality of student writing. Word processing resulted in an average effect size of 0.55 meaning that students who engaged in writing with the word processor had scores that were 21 percentile points above the students who wrote their compositions by hand. The ability of the word processor to support writing allows students to "add, delete, and move text easily" while also allowing students to use such resources as grammar and spell checkers. The effects reported by Graham and Perin (2007) suggest that the effect for low-achieving students was even higher (effect size = 0.70).

Considering how important the use of technology has become in today's society, it is interesting to note that only 30% of the teachers in grades 4-12 frequently make use of computers and word processors as instructional supports for writing assignments. A further 34% indicated that they never use the word processor in their classrooms for writing. Using computers can be useful during each step in the writing process such as researching and using graphic organizing during prewriting, using cut and paste functions during the revising process to make changes to organization easier, and publishing a finished product is more efficient with a word processor.

MacArthur et al. (2006) said that it is probably more accurate to say that word processing in combination with instruction adapted to the technology had positive effects on students writing rather than just the use of the word processor.

Graham et al. (2007) maintain that the advent of e-mail, text messaging, and other forms of electronic text have made writing an even more flexible communication tool and one which allows us to communicate with others in society that are removed by distance and time. While these forms of communication do not always conform to standard grammar, spelling, or punctuation, students still need to possess basic skills in standard written conventions to be successful in the work world (Gambrell, Morrow, & Pressley, 2007). The authors go on to say that "students can become more meta-cognitively aware of their own thinking and may produce better writing when they use a word processor, since it does change some spelling and correct some grammar" (p. 246). The ease with which editing, revising, and re-writing can be achieved using the word processor should lead to more writing since it relieves the tedium of re-writing by hand.

Sentence Combining

Teaching students how to combine shorter sentences into longer, more complex sentences has consistently shown to have a moderate to strong effect on the quality of students writing. Sentence combining activities can be either cued or uncued. In cued sentence combining, the students are told how to combine the sentence (e.g., using the word *but* or *however*). In uncued sentence combining, students are given two or more sentences and asked to explore the different ways in which the shorter sentences can be combined into more complex sentences. Sometimes teachers explore the effect of different combinations on meaning and style. Sentence combining

resulted in an average effect size of 0.50 suggesting that students who engaged in sentence combining activities scored 19 percentile points above students who were not exposed to sentence combining.

When teachers were asked if they taught their students how to combine sentences so that they could construct more complex, sophisticated sentences, none of the teachers at any level said that they frequently taught cued sentence combining and 88% of the teachers said that they never teach cued sentence combining. For uncued sentence combining instruction, only 3% of the grade 4-12 teachers frequently made use of the strategy and 91% of the teachers admit that they never teach uncued sentence combining.

Hillocks (1986) reported that writers increase the length of their syntactic structures as they advance from grades 4-12. As well he reported that many studies have shown significant gains in quality for students engaged in sentence combining at all levels. Hillocks concluded that "sentence combining instruction helps build confidence because it is positive in approach, it emphasizes the learning of new skills rather than the avoidance of old errors, and it subordinates every other course consideration to students' writing" (p.144).

Frequently teaching sentence combining gives students the practice they need to develop and improve important sentence elaboration skills. Graham et al. (2007) reiterate that when sentence combining exercises are used as one component of a well-rounded writing program that includes ample time for writing, conferencing between teachers and peers, mini-lessons to increase skills, ample teacher modeling, and choice in writing assignments, they can help improve writing for many students. They further explain that it is through meaningful discussions that sentence combining can provide every writer with controlled, disciplined practice in constructing a variety of interesting and meaningful sentences.

Results - The Small to Moderately Powerful Practices

The third set of teaching/learning activities resulted in small to moderate impact on the quality of student writing. These include Engaging in Pre-Writing Activities, Engaging in Inquiry Activities, Process Writing, the Study of Models, and Writing for Content Area Learning. It is interesting to note that all of these somewhat less powerful practices include engaging students in activities rather than any sort of strategic instruction, supporting the notion that direct, explicit instruction is typically more valuable than simple practice.

Engaging in Pre-Writing Activities

Graham and Perin (2007) state: "Engaging adolescents in [pre-writing] activates before they write a first draft improves the quality of their writing." (p. 18). They describe activities that include gathering information about the topic, making a visual representation of ideas, and group and/or individual planning. They found that such activities resulted in an effect size of 0.32: that is, students who participated in pre-writing activities outperformed their peers who did not engage in such activities by more than 12 percentile points.

Helping students to generate ideas for writing and to organize their ideas effectively is a key component in all writing activities. In our study we found that teachers in grades 4-12 frequently use prewriting strategies 44% of the time. Only 11% of the teachers surveyed admitted that they never teach prewriting strategies.

Idea generating activities such as responding to prompts, free writing, journaling, and asking questions can be integrated into the prewriting step in lessons on how to craft particular types of writing. Students can also be taught how to use outlines and other graphic organizers to collect and organize information prior to writing. When we asked the teachers in our survey how often they used journal writing in their classrooms, 39% said that they frequently get their students to write in journals, and 31% say that they never use journals in their classrooms. When asked about free writing/discovery writing, 23% said that they frequently use this method to get their students to generate ideas, and 43% never use free writing/discovery writing.

Hillocks (1986) defined pre-writing as the moment between when the assignment is received and the time writing begins. He goes on to say that the assignment is presented at the beginning of the session in which the students are going to write. In his review, Hillocks found that writers only spend between 1-4 minutes on pre-writing activities. This does not seem like a lot of time to generate and organize ideas. For students to learn how to function independently from the teacher, they must learn how to use pre-writing skills such as mapping out a plan by making a list, a web, or an outline. These students learn to take their assignments beyond the brainstorming stage if they are allowed to frequently engage in pre-writing activities.

Engaging in Inquiry Activities

Inquiry activities "help [students] develop ideas and content . . . by analyzing immediate concrete data (comparing and contrasting cases or collecting and evaluating evidence)" (Graham & Perin, 2007, p. 19). Inquiry activity engagement showed an effect size of 0.32 (the same as pre-writing activates) suggesting that students in classes where inquiry was a focus outperformed the control students by more than 12 percentile points. (It should be noted here that Hillocks'

1986 study reported higher effect sizes than Graham and Perin. Hillocks reported an effect size 0.54 for Inquiry Activities.)

Using inquiry activities serves as a tool for understanding complex information and to write about data across the curriculum including how to analyze mathematical and scientific information. In our study teachers of all grades from 4-12 reported that they frequently use inquiry activities 17% of the time. We also found that 39% of the teachers never use inquiry activities of any kind in their classrooms.

When teaching using an inquiry method teachers supply their students with objects that they have to identify. Teachers then instruct students on how they might describe the object, what types of words might be used, and what kinds of features need to be written about to make identification easier. Hillocks found that writing creatively can be simulated through such activities. Graham et al. (2007) say that teachers using the inquiry method draw on the students' observations to emphasize writing goals such as offering specific information, narrowing the focus, and thinking about the reader's needs.

Students need guidance and practice to develop their capacity for inquiry. By frequently focusing on effective and specific inquiry activities, designed by the teacher, students can learn the skill and practice it.

Process Writing Approach

"The process writing approach stresses activities that emphasize extended opportunities for writing, writing for audiences, self-reflection, personalized instruction and goals, and cycles of planning, translating, and reviewing" (Graham & Perin, 2007, p. 19). A process writing approach resulted in an effect size of 0.32 (the same as pre-writing and inquiry) meaning that

students who participated in a process writing program outperformed controls by more than 12 percentile points. Graham and Perin note, however, that the effects were stronger when teachers were trained in using a process writing approach (effect size = 0.46), but were negligible when teachers had not received explicit and extensive training. Since implementing a process writing approach is a substantial investment in time and resources, any recommendation about the use of this strategy without adequate training has to be weighed between the cost and the benefits.

We found that only 18% of teachers in grades 4-12 frequently used the process writing approach while fully half of teachers at this level say they never use the process writing approach. Interestingly, 6% of the teachers suggest that they engage students in a process writing/workshop approach as a single unit taught yearly. Our survey did not ask teachers about their training in teaching a process approach.

There is a need for effective professional development which requires time and resources if it is to be effective. In *Because writing matters,* the National Writing Project and Nagin (2006) write that "ample research from the last decade shows that staff development is both a crucial element in school reform and a catalyst for change in building a school culture that supports a high level of adult and student learning" (p. 57). He goes on to say that it is teachers' groups and professional communities that offer the most effective way of providing the opportunity for learning. Such a community presents the best opportunity for reform in the educational system because it allows for sustained learning and development. The change needed

cannot be accomplished through traditional staff development models –episodic,

decontextualized injections of knowledge and technique. The path to change in

the classroom core lies within and through teachers' professional communities,

learning communities which generate knowledge, craft new norms of practice,

and sustain participants in their efforts to reflect, examine, experiment and change

(p. 57).

Therefore the cost of training teachers how to teach writing may be great, but the potential benefits to the children cannot be measured in strictly monetary terms. By implementing the writing process frequently in their classrooms teachers can clarify their expectations, tailor their instruction, and simplify the assessment of assignments.

Study of Models

Another small to moderate effect size was realized as a result of having students study good models of the kind of writing that they were expected to produce. The six studies reviewed by Graham and Perin (2007) resulted in an effect size of .25, suggesting that students who systematically analyzed pieces of writing for the purpose of imitating the forms performed at approximately 10 percentile points above those students who did not. The effect size was small, but significant.

When incorporating the use of models in the classroom, teachers are providing their students with opportunities to read, analyze, and emulate models of good writing. Using models in the classrooms is based on the assumption that apprentice writers will learn from seeing what others have done and from imitating those forms and techniques (Hillocks, 1986). Only 27% of the grade 4-12 teachers use expert models in their lessons, and a further 27% use other students writing as models. Approximately 1 in 3 teachers never use models of any kind in their classrooms at this level.

Modeling can be used at every step in the writing process. Models can be used as examples of different types of writing to help students understand the characteristics of good

writing and how to improve their own writing. By frequently showing students good models of writing students learn how words go together, teachers can help students emulate good writing. When teachers routinely lead their students through an analysis of what constitutes good writing, students can question why certain writing works and why some writing doesn't work.

Writing for Content Area Learning

The final teacher/learning activity reported by Graham and Perin (2007) was writing for the purpose of learning content area material. They reported a small but consistent effect (effect size = 0.23), indicating that students who participated in writing to learn activities outperformed their peers who did not participate in these activities by approximately 9 percentile points. It should be noted here, however, that there are reasons other than the improvement of writing for teachers to engage in having students write in the content areas (learning material, exploring content, etc.) that were not measured in this analysis since the Graham and Perin study focused on the improvement of writing quality.

In middle and high school classrooms knowledge becomes specialized and content is particularly important. All teachers can use writing to assist students to reflect and think critically about content. Teachers in grades 4-12 frequently make use of this strategy 32% of the time and only 18% admit that they never use writing in the content areas.

Macarthur et al. (2006) see content area learning as having students take part in social communities within each subject area. They talk of goals and expectations that students bring to the communities and what experience and factors shape how they will engage in the conversations needed to help them learn to write in the content areas. Writing for content area learning is a tool used across the curriculum in math, science, social studies, science and the arts.

These strategies can include learning how to write story problems in math, lab reports in science and surveys in social studies. Frequently using writing as a tool for learning content material can make teachers of all disciplines more confident and capable of incorporating writing in their everyday instruction.

Two Other Activities

The teaching of formal grammar has been an issue in the teaching of writing for more than a hundred years. Graham and Perin (2007) report findings similar to other studies on the effect of formal grammar instruction on the improvement of writing: that is, that there is no improvement as a result of formal grammar instruction and that instruction in formal grammar can impede the improvement of writing. Graham and Perin did not report the average effect size, but reported that it was negative and "small but significant" (p. 21). From their previous meta-analysis from 2007, however, they reported an average effect size of -0.32 (a result similar to that found by Hillocks, 1986) suggesting that students who participate in formal grammar instruction score 10 to 11 percentile points *below* students in writing quality than their peers who do not receive grammar instruction. From these data, one could conclude that formal grammar instruction may well interfere with the development of writing improvement.

Only seven percent of the teachers in our survey said that they frequently employ grammar and usage worksheets; and 75% told us that they never employ grammar and usage worksheets. When asked about sentence diagramming, virtually none of the teachers appeared to engage their students in learning to diagram sentences. When looking at how often teachers teach their students the parts of speech, we found that approximately ten percent of them said they frequently have their students study the parts of speech, five percent teach the parts of speech as a unit, and 56% never teach students the parts of speech.

The second set of other activities is one that was explored by Hillocks in his 1986 meta-analysis but was not included in Graham and Perin's (2007) study. This was the use of scales (or rubrics) to ask students to evaluate writing in general and specifically to judge their own writing and use that information in their own compositions. Hillocks reported scales as having a moderate effect size of 0.36. Hillocks states: "In all of these experiments students received sets of criteria and applied them to their own writing or to the writing of others. . . . In all cases students were asked to examine pieces of writing in terms of a set of questions about the extent to which the writing exhibited certain characteristics." (p. 136). He also goes on to observe that the most profound effects were found when students were asked not only to assess a piece of writing, but also to suggest revisions to make the piece better.

When teachers were asked how often they used rubrics in their grades 4-12 classrooms, 49% of the teachers said that they frequently employ rubrics to help students judge their own writing; 36% of them expect their students to use the rubrics to write their own papers; but only six percent of them use rubrics as a frequent way for students to evaluate the writing of their peers. When we compare these numbers to the teachers who never use rubrics in the classroom we found that 16% of the teachers never use rubrics to judge writing; 29% never use rubrics to get students to judge their own writing; and 60% of teachers never use rubrics to help students evaluate peer compositions. Using rubrics so that students are aware of what is required for each writing task is one way that teachers can give students realistic goals and allow them to break up the task into manageable steps.

Two Observations and Limitations

The first observation about the meta-analysis is that there is no evidence from these data on how different elements from the meta-analysis could be combined in order to achieve the most effective overall writing program. Graham and Perin (2007) observe the following: "This report identifies elements of instruction that hold promise for improving writing ability. However . . . together the instructional elements do not represent a curriculum. . . . Moreover, the elements identified in this report have not been jointly tested or methodically compared with each other. Pending conclusive data on the relative effects of one strategy over another, teachers should choose on the basis of fit with existing instructional conditions and future goals." (p. 24). It is unlikely that it would be wise to implement every one of these strategies frequently in every classroom (if one could). However, many of the elements identified as effective in the meta-analysis could easily be implemented side-by-side, complementary of each other.

Having said that, it is apparent that the most powerful teaching/learning strategies are those where teachers either directly engage students in instruction (strategy instruction, summarization, specific product goals, sentence-combining, teaching scales) or where students engage collectively in learning about writing (collaborative writing, scales, inquiry). In general, merely having students engaged in writing activities is not enough to produce significant gains in writing improvement. There must be the active intervention and collaboration of others for writing instruction to be most effective. Merely practicing writing is typically not enough for students to become better writers.

Finally, it should be stated that there are a number of limitations to the study reported here. First, the data are self-reports from teachers about their classroom activities. Although the data were collected anonymously, we suspect there were times when the teachers under-reported or over-reported their behaviour. The data on the use of grammar and usage worksheets is in

direct disagreement with consultants' and department heads' observations of teacher activities, particularly in upper middle years. It is possible that teachers were reporting things they thought they *should be doing* rather than what they were *actually* doing. This is not uncommon in this type of survey research. The other limitation may be that teachers did not understand the activities we were describing. We took our terminology from both the research literature and the literature on teacher practice and hoped that teachers would understand the activities we were describing. We suspected, for example, that teachers did not entirely understand terms such as "cued sentence-combining" that were part of the survey.

Conclusion

Graham and Perin 2007) and Hillocks (1986) found in their meta-analyses that strategy instruction was effective in improving students' writing performance. The results indicated that the benefits to students were not only immediate but were also sustained over time. One of the assumptions made in this paper is that teachers should base their writing instruction on the research that is available and that the techniques used in the classrooms must be consistent with both the curriculum in use and the needs of the students being taught.

The goal of our study was to investigate whether teachers were employing evidence-based procedures in writing and with what frequency. All of the approaches reviewed have the support of research evidence, but some effect sizes are larger than others. From our survey it appears that some percentage of teachers do use Graham and Perin's eleven elements of writing instruction in their classrooms with the exception of sentence combining. It is important to keep in mind that the recommendations noted are only for instructional approaches that various researchers have chosen to study. As a result teachers can "best use the recommended techniques

by incorporating them into their ongoing literacy curricula, which will have a larger scope than all the areas covered in the recommendations put together" (Graham et al., 2007, p. 259). In this way teachers can incorporate the strategies by combining them to accomplish the goals of their curriculum.

"If students are to become good writers, we need to help them become strategic, knowledgeable, and motivated writers who are not hampered by inefficient or faulty transcription and sentence construction skills" (Graham et al., 2007, p. 5). The authors go on to say that in order for children to become better writers, they cannot just depend on learning the strategies mentioned in this paper; children have to have the opportunity to practice writing on a daily basis if they are to become accomplished writers ready to take their place in a literacy community once they leave school.

Graham & Perin (2007) Traits of Writing Grades 4-12	Frequently Once a 6 day cycle Or more	Unit – Teach a unit around this activity once a year	Never – do not use this activity
Writing Strategies Planning	35%	4%	2%
Hand in A Plan Before Beginning Drafting	18%	3%	39%
Revising	24%	3%	31%
Revise After Teacher comments	27%	1%	36%
Revise After Student comments	23%	2%	48%
Editing	24%	3%	23%
Summarization	10%	1%	52%
Collaborative Writing	15%	3%	43%
Specific Product Goals Setting specific subgoals	25%	2%	25%
Rubrics To Judge Writing	49%	2%	16%
To write their own Papers	36%	0%	29%
To Evaluate Others	6%	4%	60%
Word Processing	29%	1%	33%
Sentence Combining Cued	0%	3%	87%
Uncued	3%	3%	91%
Prewriting – generate or organize ideas	43%	0%	11%
Inquiry Activities – analyze immediate concrete data	17%	1%	39%

Graham & Perin (2007) Traits of Writing Grades 4-12	Frequently Once a 6 day cycle Or more	Unit – Teach a unit around this activity once a year	Never – do not use this activity
Process Writing Approach	17%	6%	49%
Study of Models			
Expert Models	26%	3%	31%
Other Student Writing	27%	1%	32%
Writing for Content Learning	32%	1%	17%
Graphic Organizers	20%	2%	35%
Journal Writing	39%		31%
Free Writing/Discovery Writing	23%		43%
Formal Grammar Instruction			
Grammar & Usage Worksheets	7%		75%
Diagramming Sentences	1%	1%	1%
Parts of Speech	10%	5%	56%
Specific Product Goals			
Rubrics To Judge Writing	49%	2%	16%
To write their own Papers	36%	0%	29%
To Evaluate Others	6%	4%	60%

Note 1: This study originally grew out of a study carried out in a graduate seminar in language and literacy at the University of Manitoba. Students in the seminar aided in the collection of the data by helping in constructing the survey and contacting school divisions, school principals, and teachers within those divisions. We would like to express our sincere gratitude to these students and professionals for their help in collecting the data.

Note 2: In this paper, we have reported only three categories (frequently, as a unit, and seldom or never). We collapsed "seldom," "never," and "not familiar" into a single category which we report as "seldom or never." In this paper, we are not reporting the "occasionally" category.

Note 3: Effect size is a calculation of the difference between groups in an experimental or quasi-experimental study. In this set of studies, the statistic used was the Cohen d. It is calculated for each study by subtracting the average performance of the control group from the average performance of the experimental group. This difference is then divided by the standard deviation (a standard measure of variation within groups) of the two groups taken together. The meta-analysis is the weighted average of all of the effect sizes in any group of studies.

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